

**U.S. Department of Justice**

Bureau of Alcohol, Tobacco, Firearms and Explosives

**Firearms Technology Criminal Branch  
Report of Technical Examination**
**244 Needy Road  
Martinsburg, WV 25401**
**Phone: 304-616-4300**
**Fax: 304-616-4301**
**To:**

Special Agent Dean Conigliaro  
Bureau of Alcohol, Tobacco, Firearms and Explosives  
32 Old Slip  
7<sup>th</sup> Floor, Suite 700  
New York, NY 10005

**UI#:** 765040-23-0011

**RE:** Rare Breed Triggers

**FTCB#:** 2023-724-ALC  
326038

**Date Exhibit Received:** 4/20/2023

**Type of Examination Requested:**
**Delivered by:** FedEx 7718 9820 5250

Test, Examination, Classification

*These findings are founded on my experience and my review of pertinent laws, materials, and records. I reserve the right to amend or supplement this report.*

**Exhibit:**

**42.** Rare Breed Triggers, model FRT-15, no serial number (suspected machinegun).

**Pertinent Authority:**

Title 28 of the United States Code (U.S.C.) provides the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) the authority to investigate criminal and regulatory violations of Federal firearms law at the direction of the Attorney General. Under the corresponding Federal regulation at 28 C.F.R. 0.130 the Attorney General provides ATF with the authority to investigate, administer, and enforce the laws related to firearms, in relevant part, under 18 U.S.C. Chapter 44 (Gun Control Act) and 26 U.S.C. Chapter 53 (National Firearms Act). Pursuant to the aforementioned statutory and regulatory authority, the ATF Firearms and Ammunition Technology Division (FATD) provides expert technical support on firearms and ammunition to federal, state, and local law enforcement agencies regarding the Gun Control Act and the National Firearms Act.

The Gun Control Act (GCA), 18 U.S.C. § 921(a)(24), defines the term “**machinegun**” as having: “... *the meaning given such term in section 5845(b) of the National Firearms Act (26 U.S.C. 5845(b)).*”

The National Firearms Act (NFA), 26 U.S.C. § 5845(a), defines “**firearm**” to include: “... (1) *a shotgun having a barrel or barrels of less than 18 inches in length; (2) a weapon made from a shotgun if such weapon as modified has an overall length of less than 26 inches or a barrel or barrels of less than 18 inches in length; (3) a rifle having a barrel or barrels of less than 16 inches in length (4) a weapon made from a rifle if such weapon as modified has an overall length of less than 26 inches or a barrel or barrels of less than 16 inches in length;*

Special Agent Dean Conigliaro

765040-23-0011

2023-724-ALC

Page 2

(5) any other weapon, as defined, as defined in subsection (e); (6) **a machinegun**; (7) any silencer (as defined in 18 U.S.C. § 921); and (8) a destructive device. The term “firearm” shall not include an antique firearm or any device (other than a machinegun or destructive device) which, although designed as a weapon, the...[Attorney General]...finds by reason of the date of its manufacture, value, design and other characteristics is primarily a collector’s item and is not likely to be used as a weapon.”

The NFA, 26 U.S.C. § 5845(b), defines “**machinegun**” as: “...**any weapon which shoots, is designed to shoot, or can be readily restored to shoot, automatically more than one shot, without manual reloading, by a single function of the trigger.** The term shall also include the frame or receiver of any such weapon, any part designed and intended solely and exclusively, or **combination of parts designed and intended, for use in converting a weapon into a machinegun**, and any combination of parts from which a machinegun can be assembled if such parts are in the possession or under the control of a person.” (emphasis added)

The NFA, 26 U.S.C. § 5842, “**Identification of firearms**,” states: “... (a) Identification of firearms other than destructive devices. - Each manufacturer and importer and anyone making a firearm shall identify each firearm, other than a destructive device, manufactured, imported, or made by a serial number which may not be readily removed, obliterated, or altered, the name of the manufacturer, importer, or maker, and such other identification as the ... [Attorney General]... may by regulations prescribe. (b) Firearms without serial number. - Any person who possesses a firearm, other than a destructive device, which does not bear the serial number and other information required by subsection (a) of this section shall identify the firearm with a serial number assigned by the ... [Attorney General]... and any other information the...[latter]... may by regulations prescribe.”

Finally, 27 CFR §§ 478.11 and 479.11, further define the term “**machinegun**” to include two sentences at the end of the statutory definition to read as follows: “...For purposes of this definition, **the term “automatically” as it modifies “shoots, is designed to shoot, or can be readily restored to shoot,” means functioning as the result of a self-acting or self-regulating mechanism that allows the firing of multiple rounds through a single function of the trigger; and “single function of the trigger” means a single pull of the trigger and analogous motions.** The term “machine gun” includes a bump-stock-type device, i.e., a device that allows a semi-automatic firearm to shoot more than one shot with a single pull of the trigger by harnessing the recoil energy of the semiautomatic firearm to which it is affixed so that the trigger resets and continues firing without additional physical manipulation of the trigger by the shooter.” (emphasis added)

### **Findings:**

As background, Federal law defines “machinegun,” in relevant part, as “any weapon which shoots, is designed to shoot, or can be readily restored to shoot, automatically more than one shot, without manual reloading, by a single function of the trigger” as well as a “combination of parts designed and intended, for use in converting a weapon into a machinegun.” Legislative history for the NFA indicates that the drafters equated a “single function of the trigger” with “single pull of the trigger.” National Firearms Act: Hearings Before the Comm. On Ways and Means, House of Representatives, Second Session on H.R. 9066, 73<sup>rd</sup> Cong., at 40 (1934). ATF has long held that a single function of the trigger is a “single pull” or alternatively, a single release of a trigger. Therefore, a firearm is not a machinegun if a projectile is expelled when the trigger is pulled, and a second projectile is expelled when the trigger is released.

Special Agent Dean Conigliaro

765040-23-0011

2023-724-ALC

Page 3

Final rule 2018R-22F, which further defines the term “**machinegun**,” became effective on March 26, 2019. The final ruling clarifies the term “**automatically**” (found in the NFA, 26 U.S.C. § 5845(b)) as it modifies “shoots, is designed to shoot, or can be readily restored to shoot,” means functioning as the result of a self-acting or self-regulating mechanism that allows the firing of multiple rounds through a single function of the trigger. Additionally, the rule states “**single function of the trigger**” means a single pull of the trigger and analogous motions (27 CFR §§ 478.11 and 479.11). However, the term “trigger” is not defined by Federal law.

The term “trigger” is generally applied by the firearm industry to the mechanism that causes the firing sequence to begin, usually by releasing an energized component. The term “trigger” regarding Federal firearm laws, particularly the GCA and NFA, is context specific. Simply put, the “trigger” initiates the firing sequence.

Federal courts have noted that automatically means that the weapon “fires repeatedly with a single pull of the trigger.” *Staples v. United States*, 511 U.S. 600, 602 n. 1 (1994). “That is, once its trigger is depressed, the weapon will automatically continue to fire until its trigger is released, or the ammunition is exhausted.” *Id.* Courts have specifically affirmed ATF’s interpretation that a single act of the shooter to initiate the firing sequence is a single function of the trigger. *Akins v. United States*, 312 F. App’x 197, 200 (11<sup>th</sup> Cir. 2009); *Freedom Ordnance Mfg., Inc. v. Brandon*, No. 3:16-cv-00243-RLY-MPB (S.D. Ind. Mar. 27, 2018). *United States v. Fleischli*, 305 F.3d 643, 655 (7<sup>th</sup> Cir. 2002) (in which electronic switch was the trigger when it served to initiate the firing sequence and the minigun continued to fire until the switch was turned off or the ammunition was exhausted). In the *Freedom Ordnance* case, the United States District Court of Indiana held that ATF was not arbitrary and capricious in the classification of an “electronic reset assist device” as a machinegun even though the firearm’s trigger reset before each shot by pushing the trigger forward. *Freedom Ordnance Mfg., Inc.*, No. 3:16-cv-00243-RLY-MPB. In these cases, a firearm is a machinegun when it uses an internal mechanism or operation that automatically forces the trigger forward allowing the weapon to fire more than one shot by a continuous pull of the trigger.

ATF has a long history of examining devices which manipulate the trigger of a firearm. As part of the examination process, I researched other trigger devices, some of which ATF has previously examined and classified and some of which it has not. This was completed to research the classification history of devices which may or may not have worked similarly and to maintain consistency in those classifications. These devices include, but are not limited to, the following:

- Rare Breed Triggers, model FRT-15 (classified as a machinegun, 2021 #317388)
- Wolf Tactical, LLC model AR1 (classified as a machinegun, 2018 #307385)
- Wide Open Enterprises, model Wide Open Trigger (classified as a machinegun, 2021 #317970)
- Flex-Fire Technology
- [REDACTED] (classified as a machinegun, 2017 [REDACTED])
- [REDACTED] (classified as a machinegun, 2006 [REDACTED])
- [REDACTED] (classified as a machinegun, 2004 [REDACTED])
- Tac-Con 3MR (not classified as a machinegun, 2013 #301071)
- FosTech ECHO (not classified as a machinegun, 2013 #301397)
- [REDACTED] (classified as a machinegun, 2016 [REDACTED])
- [REDACTED] (classified as a machinegun, 1994 [REDACTED])

Special Agent Dean Conigliaro

765040-23-0011

2023-724-ALC

Page 4

**Exhibit 42** is a Rare Breed Triggers, model FRT-15, “forced reset trigger” designed to allow drop in installation into AR15-type firearms. The Exhibit is not marked with a serial number.

Exhibit 42 bears the following markings on the right side of its aluminum housing:

- **RARE BREED**
- **-TRIGGERS-**
- **US PAT. 10514223**

I manually function tested the device and noted that in order to pull the trigger, I had to manually disengage the locking bar. In order to further examine the component parts of the Exhibit 42 device, I disassembled the device utilizing a common pin punch and hammer in approximately one minute.

Exhibit 42 is comprised of the following individual component parts:

- One aluminum housing
- One hammer
- One hammer spring
- Two tubular pins
- One trigger
- One trigger spring
- One “locking bar”
- One solid pin
- One locking bar spring
- Two pins with internal threads at both ends
- Four hex head screws with exterior threads

The hammer of the Exhibit 42 device is designed in such a way that it only incorporates one sear surface. This is different from a standard semiautomatic AR15-type hammer, which incorporates two sear surfaces. The second sear surface in a semiautomatic AR15-type firearm is designed to interact with the disconnector. A disconnector can be described as the part in a semiautomatic firearm that prevents the continued firing of the gun while the trigger remains depressed. Simply put, the disconnector holds the gun at full cock as long as the trigger is held back.

In a M16-type machinegun, the hammer incorporates three sear surfaces. The first two are identical to the semiautomatic hammer in design and location. The addition of the third surface allows the hammer to engage the automatic sear. With an M16-type machinegun (selector in the “automatic” position) the first two sear surfaces are taken completely out of “play” once the trigger is pulled, and only the automatic sear retains the hammer. Similar to the relationship between the locking bar of the FRT-15, once the bolt has completed its firing cycle (described in detail below), the M16-type bolt strikes the automatic sear, disengaging it.

I researched U.S. Patent No.: 10,514,223 B1, seeing that it is marked on the side of the Exhibit. This patent, which was applied for by the manufacturer of the AR1 trigger device, Wolf Tactical LLC (now assigned to Rare Breed Firearms), outlines the design and function of a “firearm trigger mechanism.” The patent describes a “drop-in” trigger mechanism for an AR15-type firearm, as discussed below. This patent depicts a device which is virtually identical in geometry, but functions in the same manner as the Rare Breed Firearms FRT-15.

Special Agent Dean Conigliaro

765040-23-0011

2023-724-ALC

Page 5

U.S. Patent Number 10,514,223 B1 includes illustrations which closely parallel the Exhibit 42 Rare Breed FRT-15 device in its “drop-in” concept, though having differing geometry in its component parts (see attached patent) such as the hammer, trigger, and “locking bar.” The device is designed to allow “drop-in” installation into an AR15-type firearm and function in conjunction with an H3 weight buffer and M16-type machinegun bolt carrier rather than a standard semiautomatic AR15-type bolt carrier. The M16-type bolt carrier incorporates a contact surface that is unnecessary on AR15-type semiautomatic firearms because this surface is designed to “trip” the automatic sear in standard M16-type machineguns. This surface is utilized to similarly “trip” the “locking bar” in FRT-15 equipped AR15-type firearms during the operating cycle. The M16-type bolt carrier interacts with the “locking bar” in the same manner that it interacts with an automatic sear. Indeed, it is telling that in the attached patent, Wolf Tactical LLC Patent.: U.S. 10,514,223 B1, includes the following in 4, 50, and 55 (emphasis in red added):

*The bolt carrier assembly 52 used with the embodiments of this invention can be an ordinary (mil-spec) M16-pattern bolt carrier assembly, whether operated by direct impingement or a gas piston system, that has a bottom cut position to engage an auto sear in a fully automatic configuration. The bottom cut creates an engagement surface 54 in the tail portion 56 of the bolt carrier body 58. This is distinct from a modified AR15 bolt carrier that is further cut-away so that engagement with an auto sear is impossible.*

U.S. Patent No.: 10,514,223 B1 also includes the following explanation revealing that the “locking bar” serves the same function as an automatic sear in a typical machinegun – to capture a fire control component until the additional surface on an M16-type bolt carrier contacts it and releases the fire control component to automatically fire a subsequent shot (emphasis added in red).

*(57) Abstract*

*The locking bar is pivotally mounted in a frame and spring biased toward a first position in which it mechanically blocks the trigger member against the spring bias to a second position when contacted by the bolt carrier reaching a substantially in-battery position, allowing the trigger member to be moved by an external force to a released position.*

...

4 (65) – 5 (2)

*An upper end of the locking bar 62 extends above the upper edge of housing 12 and lower receiver 50 to be engaged by the engagement surface 54 of the bolt carrier body 58 when the bolt carrier assembly is at or near its in-battery position.*

This “external force” allowing the trigger member to be moved to a released position, is merely the continuous pressure applied to the trigger during the initial single continuous function (pull) of the trigger. With both an FRT-15 equipped AR15-type firearm, and an M16-type machinegun (with the selector set in its “automatic” position), the shooter maintains a constant rearward pull of the trigger to fire subsequent shots with a single function (pull) of the trigger, through both the M16-type machinegun and FRT-15 equipped AR15-types self-acting or self-regulating mechanisms during the operating cycle of the firearms.



Special Agent Dean Conigliaro

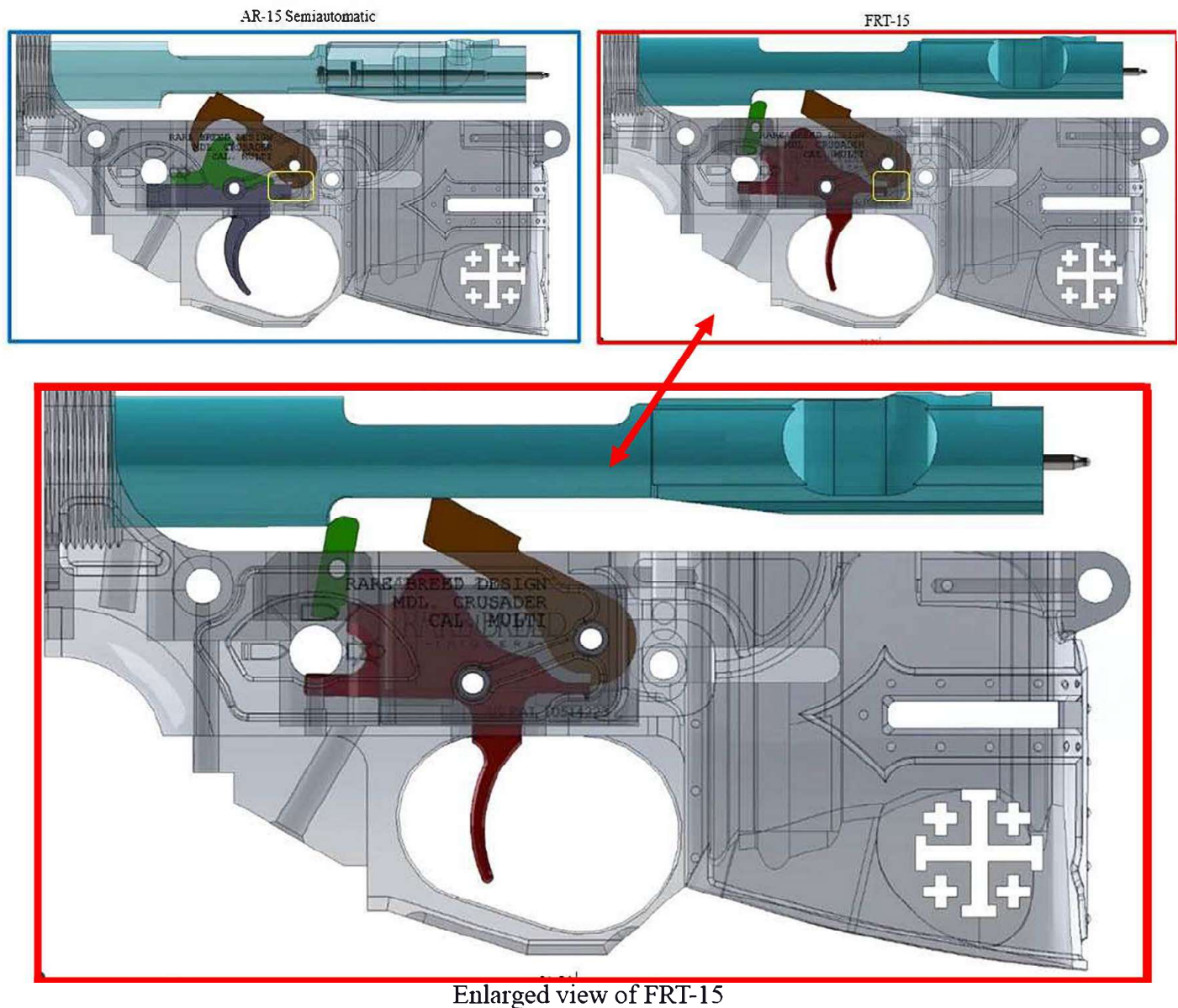
765040-23-0011

2023-724-ALC

Page 6

Basic operation of the Rare Breed Triggers FRT-15 device installed within an AR15-type firearm having a M16-type machinegun bolt carrier is as follows (images pulled from a video animation previously available on Rare Breed Triggers website, showing comparative views of the semiautomatic AR15-type and FRT-15 mechanisms, with added ATF text and highlights):

- Image of semiautomatic AR15-type (left) and FRT-15 equipped firearm (right) with both firearms ready to fire with the hammer in a “cocked” position being held by the sear surface on the front of the trigger (yellow box).



Special Agent Dean Conigliaro

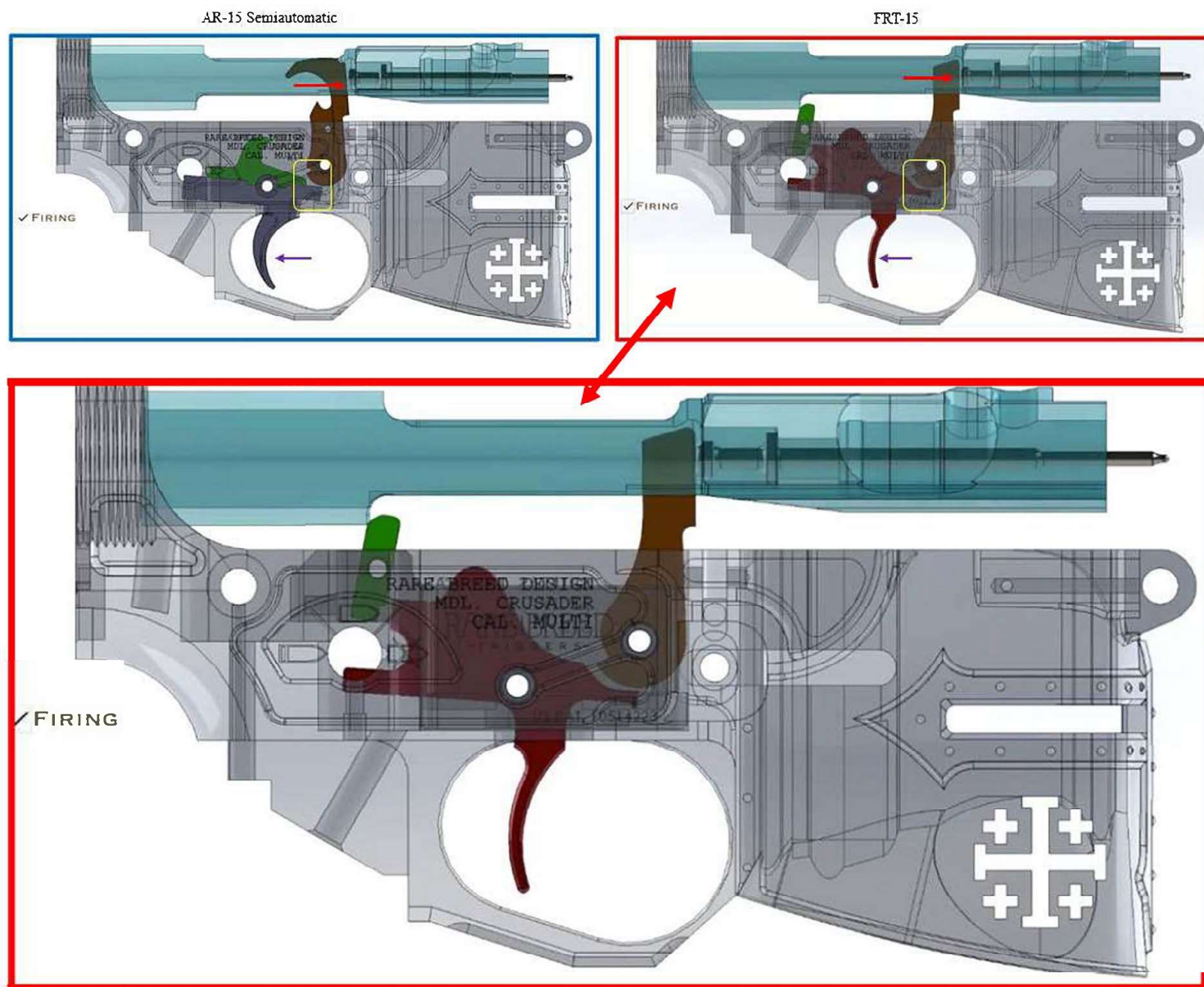
765040-23-0011

2023-724-ALC

Page 7

**Firing:**

- Rearward pressure is applied to “pull” the trigger, thus releasing the hammer, which falls impacting the firing pin and discharging the primer, which then ignites the propellant powder to accelerate the projectile (bullet) down the rifled bore.



Enlarged view of FRT-15



Special Agent Dean Conigliaro

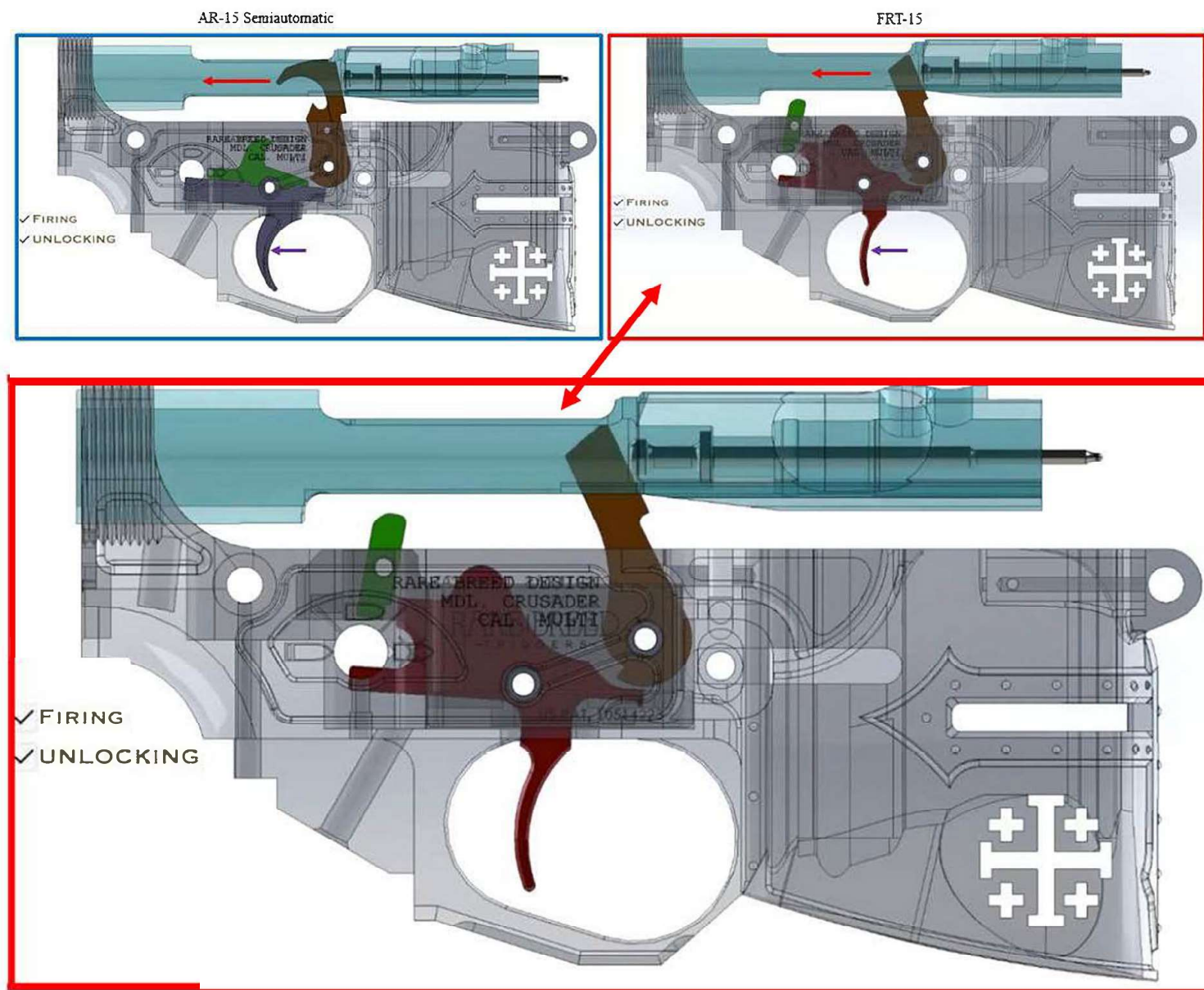
765040-23-0011

2023-724-ALC

Page 8

**Unlocking:**

- As the projectile moves past the gas port, a quantity of the gas is bled off through the gas port to the gas tube, and subsequent bolt carrier key into a cylindrical section in the bolt carrier where it expands and drives the bolt carrier rearward. Note that this happens **rapidly** while rearward “pull” pressure from the trigger pull is generally maintained on the trigger. During the initial rearward travel of the carrier assembly, the bolt is rotated by the cam pin, acted on by the bolt carrier cam slot. This rotation disengages the bolt lugs from the barrel extension lugs so the bolt is unlocked. The bolt carrier group then continues rearward with the unlocked bolt assembly which starts to act upon the hammer.



Enlarged view of FRT-15



Special Agent Dean Conigliaro

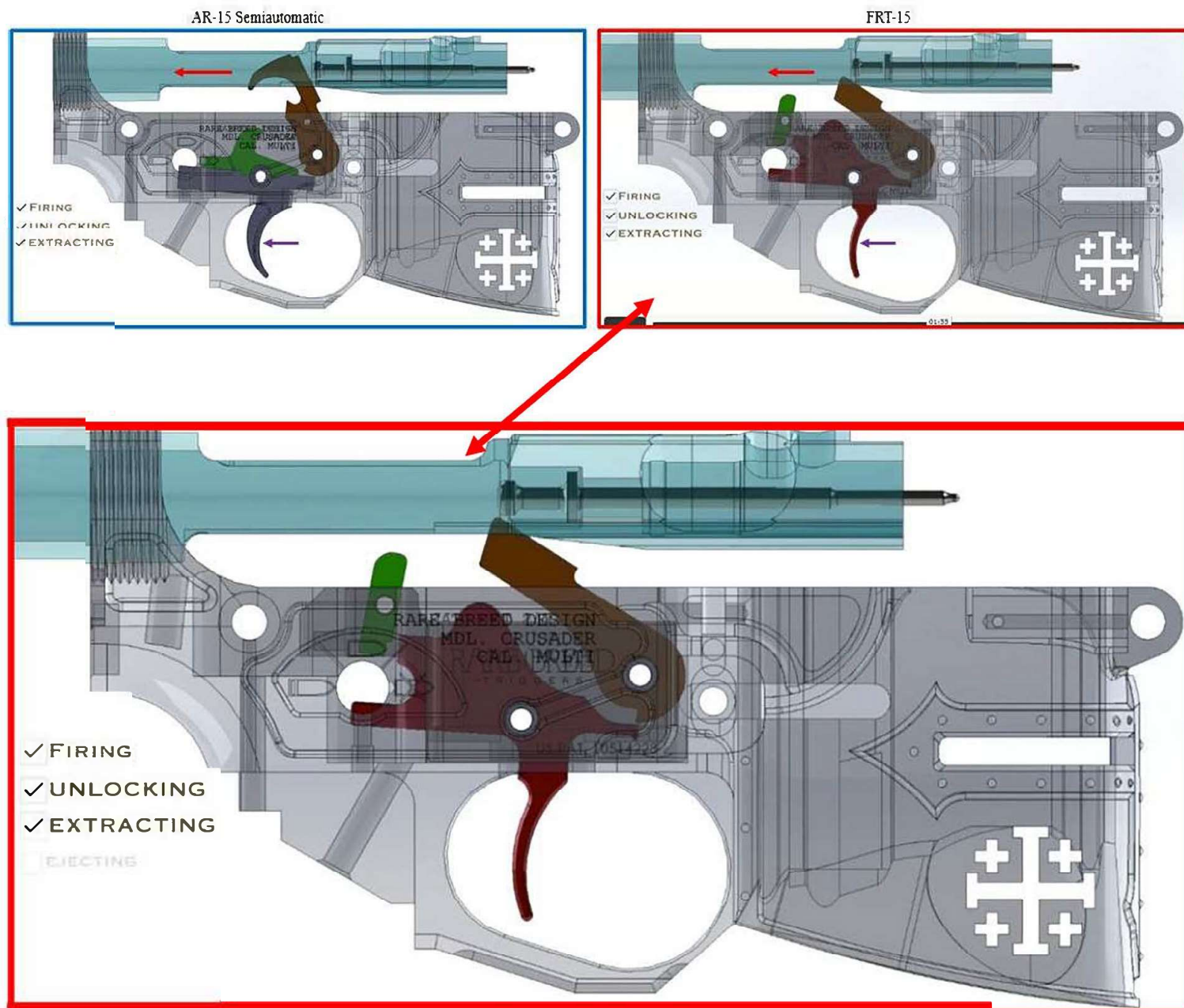
765040-23-0011

2023-724-ALC

Page 9

**Extracting:**

- The fired cartridge case is extracted/withdrawn from the chamber as the bolt carrier group continues its rearward travel, also continuing to further depress the hammer.



Enlarged view of FRT-15

Special Agent Dean Conigliaro

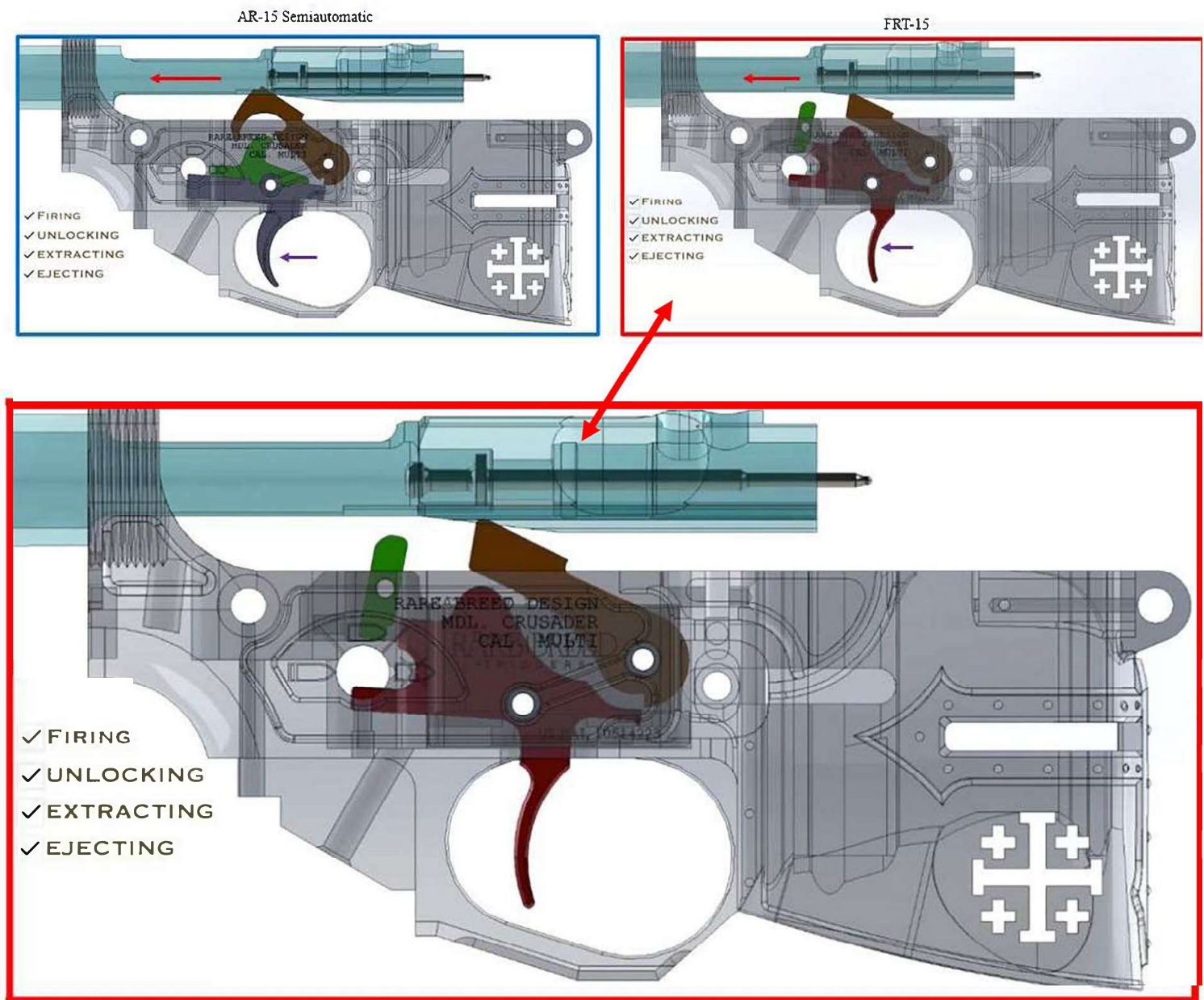
765040-23-0011

2023-724-ALC

Page 10

**Ejecting:**

- As the spent case is fully extracted/withdrawn from the chamber, the spring-loaded ejector, acting against the left side of the case head, pushes the spent case out of the ejection port. The bolt carrier group continues rearward, still depressing the hammer.





Special Agent Dean Conigliaro

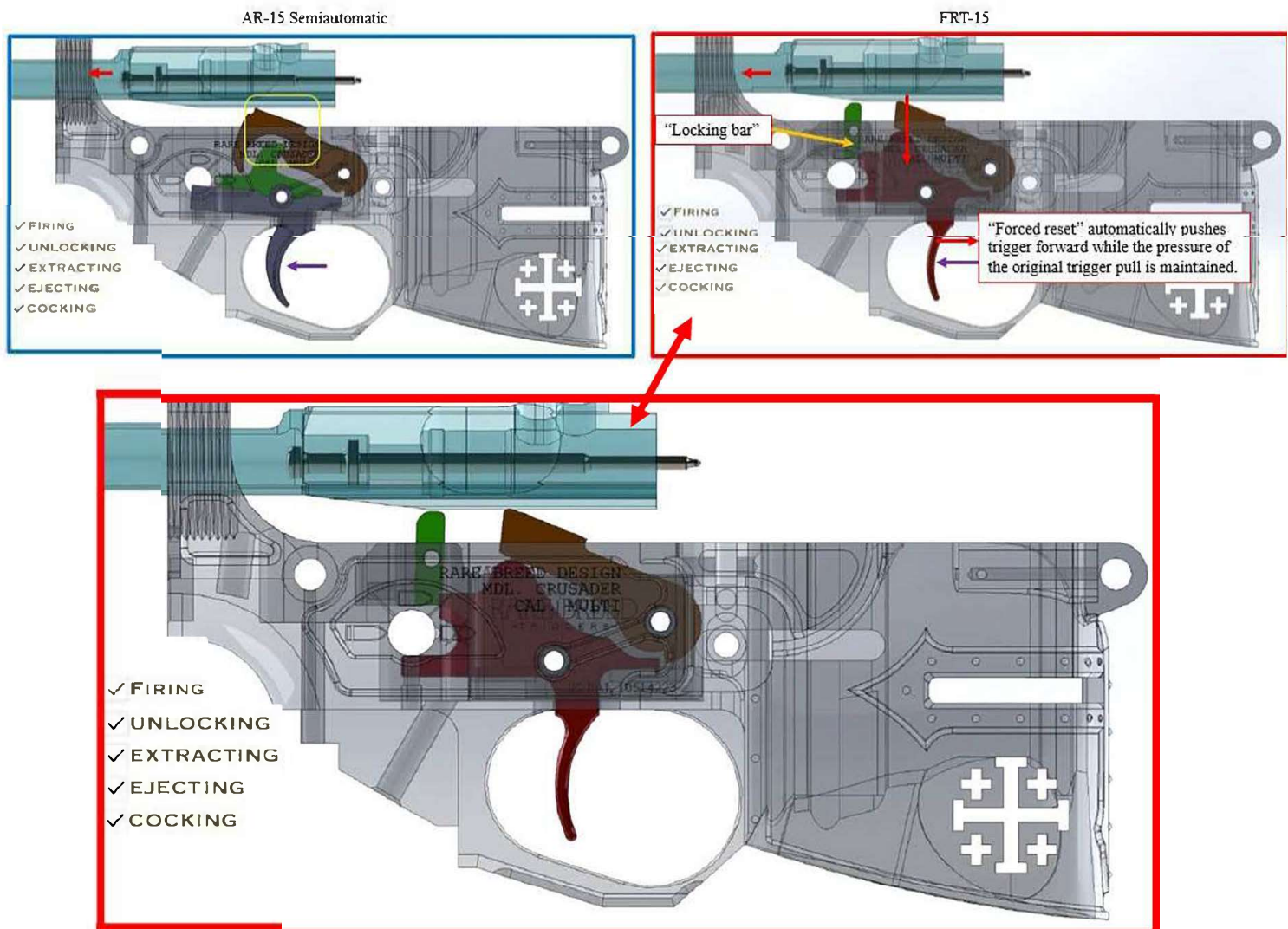
765040-23-0011

2023-724-ALC

Page 11

**Cocking:**

- At this point, the operation of a firearm with an FRT-15 (right and bottom images) differs from a semiautomatic AR15-type firearm (left image). In a semiautomatic AR15-type firearm, the hammer is pushed down by the bolt carrier and is retained by the disconnecter and held there until the shooter releases the trigger (done after *feeding* and *chambering*), the disconnecter releases the hammer, and the hammer comes to rest on the trigger sear surface, ready to expel a second projectile with a subsequent pull of the trigger. Conversely, in the FRT-15 equipped firearm, as the bolt carrier group continues rearward, the hammer is pushed down by the bolt carrier group, but it also pushes down on the trigger, which forces it forward. The trigger is pushed slightly forward as an automatic consequence of the FRT-15 design without any further action required by the shooter. This causes the hammer to engage the trigger sear surface. Differing from a standard semiautomatic firearm, the unique FRT-15 trigger design also engages the “locking bar” to momentarily keep the trigger in place so that the shooter may not override the timing of the automatic functioning of the weapon.



Enlarged view of FRT-15

Special Agent Dean Conigliaro

765040-23-0011

2023-724-ALC

Page 12

“Timing” in relation to automatic firearms can be described as ensuring that the firing mechanism is not activated until the bolt or breech is fully locked or in battery. Timing is especially important in automatic weapons because if the firing mechanism is engaged before the bolt or breech is fully locked or in battery, two possible outcomes can occur. The first being the firing mechanism *does not* have enough force to ignite the primer, causing a malfunction known as failure to fire, which would cause the shooter to manually clear the malfunction and begin the process over again. The second being that the firing mechanism *does* provide enough force to ignite the primer and an often catastrophic malfunction, known as an “out-of-battery detonation” occurs. An “out-of-battery detonation” occurs when a round is fired without being fully seated in the chamber and the chamber not being fully sealed to contain the explosion. This causes the pressure from the round (e.g.: approximately 55,000 psi in a .223 Remington cartridge) to be released into the action of the firearm, often causing catastrophic damage to the firearm, and possibly the shooter.

It is important to note that at this moment the hammer is solely retained by the trigger sear surface. The trigger, still being pulled rearwards by the shooter is unable to disengage from the hammer because the “locking bar” prevents the trigger from dropping out of engagement with the hammer. This is done to prevent the firearm from operating in what is known as a “hammer follow” condition. “Hammer follow” is described as when the hammer is not retained by the disconnecter and follows the bolt as it feeds the cartridge into the chamber. Without mechanical delay in hammer travel imparted, the hammer fall is uncontrolled and may lack sufficient force to detonate the primer of the cartridge. Hammer follow AR-type firearms that shoot automatically are classified as “**machineguns.**”

This section is intentionally left blank.



Special Agent Dean Conigliaro

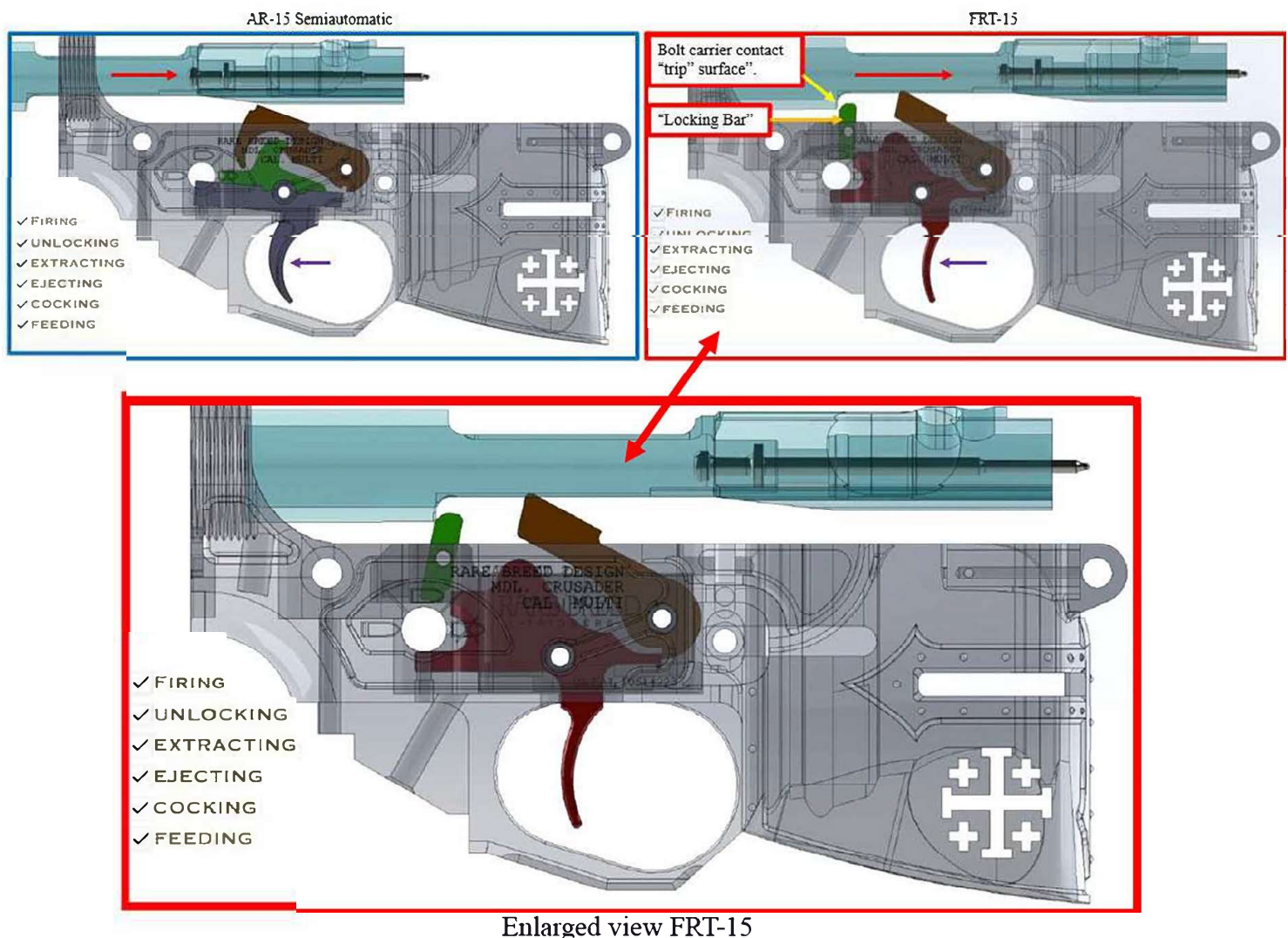
765040-23-0011

2023-724-ALC

Page 13

**Feeding/Chambering:**

- As the bolt carrier moves forward into battery, using the force of the action spring, the front of the bolt removes the next round from the magazine and feeds it into the chamber. Once the bolt is fully locked, and timed properly, the contact surface on the required M16-type machinegun bolt carrier (which is designed to interact with the automatic sear on M16-type firearms), strikes the FRT-15 (right and bottom images) “locking bar,” releasing the trigger, which is still being pulled to the rear by the shooter. The necessity of an M16-type machinegun bolt carrier is clear at this point—it acts on the “locking bar” in the same way it acts on the M16-type machinegun automatic sear. Specifically, when the bolt moves forward into firing position, and is fully locked, it contacts the surface area on the “locking bar” or the automatic sear and automatically fires a subsequent round while the initial single pull is maintained on the trigger. Note that the disconnecter on the semiautomatic AR15-type continues to retain the hammer until the shooter manually releases the trigger.



Enlarged view FRT-15

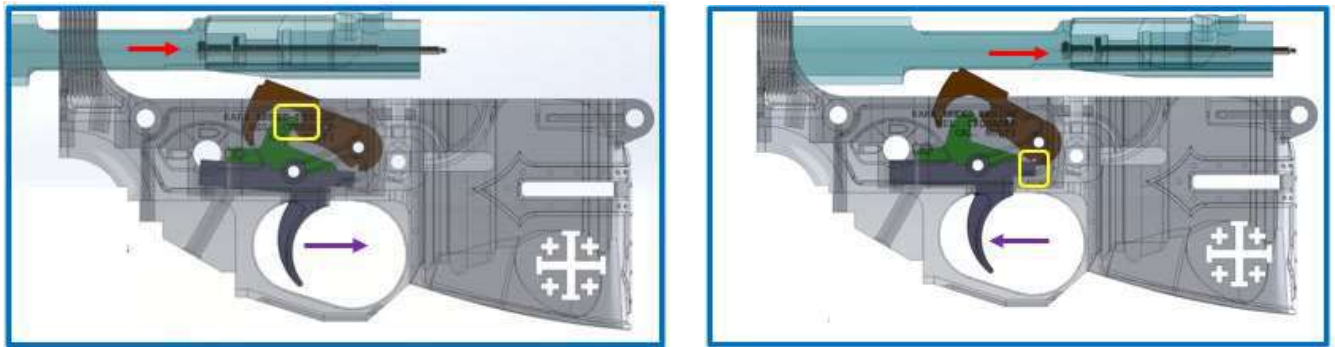
Special Agent Dean Conigliaro

765040-23-0011

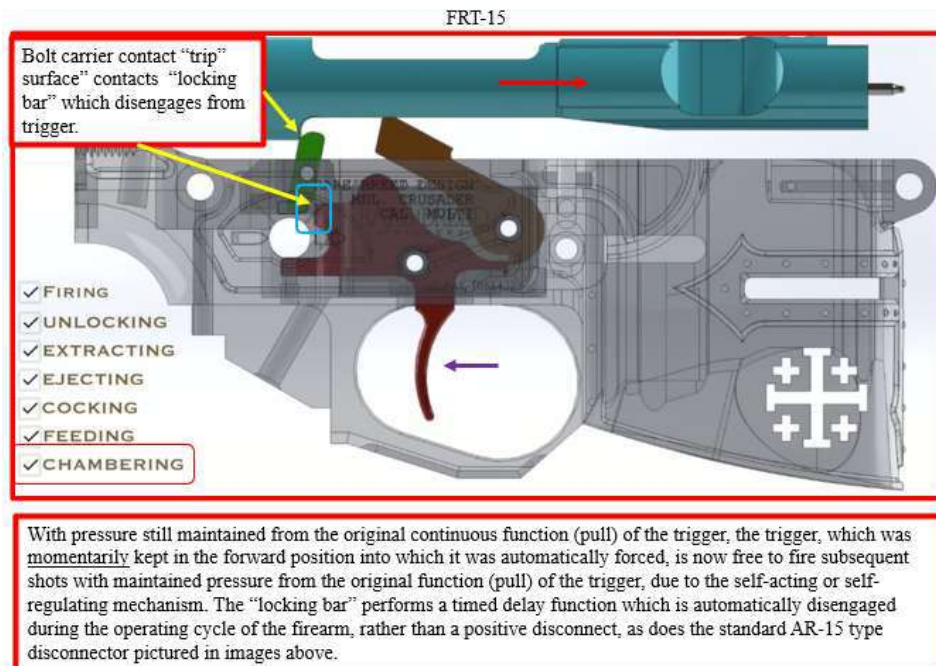
2023-724-ALC

Page 14

- After firing a shot with a semiautomatic AR15-type firearm, the shooter is required to manually release the trigger which releases the hammer from the disconnector (left image in yellow box) and the hammer comes to rest on the trigger sear surface (right image in yellow box), and then manually pull the trigger a second time to fire a subsequent shot. The disconnector is designed to retain the hammer and “disconnect” or stop the firing cycle from automatically continuing, until the shooter has manually manipulated the trigger by releasing it.



- If the shooter maintains constant rearward pressure from the original single function (pull) of the trigger, the FRT-15 trigger will automatically perform the functions described above in a self-acting or self-regulating mechanism, allowing subsequent projectiles to be fired during the continuing cycle of operation. This self-acting or self-regulating mechanism in the FRT-15 device is the function of the bolt carrier assembly pushing down the hammer, which then pushes down on the trigger, forcing it forward. This is done as an automatic function utilizing the operation of the AR15-type system, with no input needed from the shooter. The “locking bar” is a key component of this self-acting or self-regulating mechanism, as once the bolt carrier assembly has “tripped” the “locking bar,” the firing cycle automatically continues, and will continue until the shooter manually releases the trigger, or the ammunition is exhausted.



Special Agent Dean Conigliaro

765040-23-0011

2023-724-ALC

Page 15

From the moment the trigger is pulled, and as long as rearward pressure is applied to the trigger through a single constant pull, a firearm with an FRT-15 continues to fire until the finger is removed from the trigger, the weapon malfunctions, or the ammunition is exhausted. The described firing cycle takes place regardless of the purported “forced reset” pushing the trigger forward.

To demonstrate this, I installed Exhibit 42 into a Daniel Defense model DDM4 (ATF tag number 0581217) AR15-type rifle from the ATF National Firearms Collection (NFC). Installing the Exhibit into the NFC DDM4 was accomplished in approximately five minutes using a commonly available pin punch, hammer, and a standard “flat-head” screwdriver.

I first test fired the NFC DDM4 **without Exhibit 42 installed** on April 20, 2023, at the ATF test range, Martinsburg, West Virginia, using commercially available, Federal brand, .223 Remington caliber ammunition and a magazine from the NFC. I inserted a one-round ammunition load and pulled the trigger. The NFC DDM4 successfully expelled a projectile by the action of an explosive. I then inserted a two-round ammunition load and pulled the trigger. The NFC DDM4 expelled only one round for each separate function of the trigger. Next, I inserted a five-round ammunition load and pulled the trigger; the NFC DDM4 expelled only one round for each separate function of the trigger.

I then test fired the NFC DDM4 **with Exhibit 42 installed** on April 20, 2023, at the ATF test range, Martinsburg, West Virginia, using the same commercially available, Federal brand, .223 Remington caliber ammunition and the same magazine from the NFC. I inserted a one-round ammunition load, with the selector in the “semiautomatic” position and pulled the trigger. The NFC DDM4, with Exhibit 42 installed, successfully expelled a projectile by the action of an explosive. I repeated this same test with the magazine being removed after the cartridge was chambered, and noted that the hammer, rather than remaining in a cocked position, as would normally be the case with a standard AR15-type semiautomatic firearm, after firing one round with a single function (pull) of the trigger, had been released a second time, indicating that Exhibit 42 had initiated a second firing cycle with the original single function (pull) of the trigger. I repeated this method of test-fire one additional time, obtaining the same result.

I then inserted a two-round ammunition load and pulled the trigger; the NFC DDM4, with Exhibit 42 installed, fired both rounds automatically by a single function of the trigger. I repeated this method of test fire two additional times, achieving the same result.

Next, I inserted a five-round ammunition load and pulled the trigger. The NFC DDM4, with Exhibit 42 installed, fired all five rounds automatically, without manual reloading, by a single function of the trigger. I repeated this five-round method of test fire two additional times, achieving the same result.

The FRT-15 “drop-in” device is uniquely designed to interact with the required M16-type machinegun bolt carrier during the cycle of operation **in the same manner** that the M16-type machinegun bolt interacts with the machinegun automatic sear. This allows the weapon to function automatically with the FRT-15 self-acting, or self-regulating mechanism, with one continuous pull of the trigger, and allows the weapon to shoot automatically, more than one shot, without manual reloading, by a single function (pull) of the trigger, until the trigger is manually released by the shooter, or the ammunition is exhausted.



Special Agent Dean Conigliaro

765040-23-0011

2023-724-ALC

Page 16

While on standard semiautomatic AR15-type firearms, the cycle of operation is interrupted between shots by a disconnecter which requires that the trigger be both manually released and then manually pulled again to fire a subsequent shot, no such action is required to fire subsequent shots on the FRT-15 equipped AR15-type firearm. Indeed, the FRT-15 design requires only that the shooter maintain the initial trigger pull, while the self-acting or self-regulating FRT-15 mechanism forces the trigger forward during the rearward movement of the required M16-type machinegun bolt carrier, and then automatically releases the trigger and hammer, as the “locking bar” interacts with the “trip surface” on the M16-type machinegun bolt carrier, as the firearm goes into battery. All of these actions occur if the shooter maintains a single, constant pull of the trigger.

For informational purposes, the cyclic rate of fire of an M16-type, M4 machinegun is approximately 700 to 970 RPM as published in U.S. Army Technical Manual TM 9-1005-319-10, page 0002 00-3. To verify this, FTCB has previously tested the rate of fire of a 5.56 caliber M16-type, M4 machinegun, (tag number 0488490) from the ATF NFC utilizing a Competition Electronics brand shot timer to measure the approximate rounds per minute (RPM). This test determined that the average rate of fire of the NFC M16-type, M4 machinegun (tag number 0488490) was **870.4** RPM.

To demonstrate that the cyclic rate of fire with an FRT-15 machinegun conversion device equipped semiautomatic AR-type rifle is comparable to an M16-type machinegun, the same test was previously conducted utilizing a .223 Remington caliber NFC AR15-type semiautomatic rifle receiver (tag number 0550101) equipped with an FRT-15 machinegun conversion device and utilized the same upper assembly, buffer, and recoil spring used with the NFC M16 rate of fire test. This test determined that the average rate of fire of the NFC semiautomatic AR15-type rifle receiver (tag number 0550101) equipped with a Rare Breed Triggers FRT-15 machinegun conversion device was **840.8** RPM.

It is significant to note that following the above outlined test procedure, utilizing the same magazine and ammunition obtained from the same lot, that the measured rate of automatic fire when both triggers were held to the rear with a single constant pull was similar (870.4/840.8) in both weapons' automatic cyclic rates.

Exhibit 42 is a combination of parts designed and intended for use in converting a weapon into a machinegun, and through demonstration, successfully converted the semiautomatic NFC S-15 rifle into a machinegun; therefore, Exhibit 42, is a “machinegun” as defined.

### **Conclusions:**

**Exhibit 42** is a “**machinegun**” as defined in 18 U.S.C. § 921(a)(24).

**Exhibit 42** is a combination of parts designed and intended, for use in converting a weapon into a machinegun; thus, is a “**machinegun**” as defined in 26 U.S.C. § 5845(b).

**Exhibit 42**, being a machinegun, is also a “**firearm**” as defined in 26 U.S.C. § 5845(a)(6).

**Exhibit 42** bears no NFA manufacturers marks of identification or serial number as required by 26 U.S.C. § 5842.



Special Agent Dean Conigliaro

765040-23-0011

2023-724-ALC

Page 17

Examined By:

**ANTHONY  
CIRAVOLO** Digitally signed by  
ANTHONY  
CIRAVOLO  
Date: 2023.04.27  
14:27:12 -04'00'

Anthony Ciravolo  
Firearms Enforcement Officer

Approved By:

**CODY  
TOY** Digitally signed by  
CODY TOY  
Date: 2023.04.27  
15:05:45 -04'00'

Cody Toy  
Chief, Firearms Technology Criminal Branch

Attachment: Thirty pages bearing photographs and U.S. Patent 10,514,223 B1.

**This Firearms Technology Criminal Branch report is provided in response to your request for assistance. Please be aware that these documents may constitute "taxpayer return information" that is subject to the strict disclosure limitations provided in 26 U.S.C. § 6103. Exceptions to the non-disclosure provisions that permit the disclosure internally within ATF are set forth in 26 U.S.C. §§ 6103(h)(2)(C) and (o)(1). Any further disclosure of these reports is strictly limited and must be reviewed and approved by the Office of Chief Counsel prior to any information dissemination. Failure to adhere to the disclosure limitations provided in 26 U.S.C. § 6103 could result in civil and/or criminal liability.**